

# Fact Sheet



## For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-03900048-2012**  
Application Received: **November 2, 2011**  
Plant Identification Number: **039-00048**  
Permittee: **Columbia Gas Transmission, LLC**  
Facility Name: **Clendenin Compressor Station**  
Mailing Address: **1700 MacCorkle Avenue, SE**  
**Charleston, WV 25314**

*Revised: N/A*

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Physical Location:	Clendenin, Kanawha County, West Virginia
UTM Coordinates:	472.746 km Easting • 4260.60
4 km Northing • Zone 17	
Directions:	Traveling north on US Route 119 from Clendenin, go approximately 0.8 mile and turn right onto Thorofare Road (WV secondary Route 59). Proceed approximately 2.5 miles and turn right onto Route 59-2 and travel approximately 1.2 miles to the station.

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### Facility Description

The Clendenin compressor station compresses natural gas for pipeline transmission. The facility operates under SIC code 4922. This facility uses one (1) heating system boiler, one (1) indirect-fired heater, six (6) reciprocating engines/compressors, one (1) turbine engine/centrifugal compressor, and one reciprocating engine/generator.

## Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2011 Actual Emissions
Carbon Monoxide (CO)	289.55	28.08
Nitrogen Oxides (NO <sub>x</sub> )	3,005.34	296.47
Particulate Matter (PM <sub>10</sub> )	1.01	0.04
Total Particulate Matter (TSP)	1.01	0.04
Sulfur Dioxide (SO <sub>2</sub> )	0.57	0.06
Volatile Organic Compounds (VOC)	82.52	7.25
<i>PM<sub>10</sub> is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2011 Actual Emissions
Acetaldehyde	5.16	-
Benzene	0.27	-
Ethylbenzene	0.03	-
Formaldehyde	32.66	3.16
Hexane	0.68	-
Toluene	0.27	-
Xylene (Mixed Isomers)	0.12	-
Total HAPs	39.25	3.17

*Some of the above HAPs may be counted as PM or VOCs.*

### Title V Program Applicability Basis

This facility has the potential to emit 289.55 TPY of CO, 3,005.34 TPY of NO<sub>x</sub>, 32.66 TPY of Formaldehyde, and 39.25 TPY of Total HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Columbia Gas Transmission, LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

### Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Particulate Air Pollution from Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permits.
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Hazardous air pollutants.
	45CSR40	Ozone season NO <sub>x</sub> emissions.
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart ZZZZ	RICE MACT
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR17	Fugitive Particulate emissions

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-2247A	02/13/2007	
CO-R1-C-2007-4A (2005)	03/01/2007	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

## Determinations and Justifications

This facility was previously registered under General Permit R30-NGGP-2007 for Natural Gas Compressor Facilities. The Division of Air Quality did not renew the general permit for natural gas compressor facilities, therefore this facility's renewal will be issued as a source-specific permit. The source-specific permit includes various requirements which are potentially applicable to natural gas compressor stations. The applicable requirements column in the Section 1.0 Emission Units Table of the permit indicates which of the requirements in Sections 2.0 through 24.0 are applicable to each emissions unit.

### Removal of Equipment

A Waukesha VRG3104 Reciprocating Engine/Air Compressor (AC1) rated at 57 hp was listed in the previous permit renewal. However, it has been removed and is not included in this permit renewal.

Also, an Auxiliary Generator (Aux #1) is listed in R13-2247A. However, Columbia states that this generator has been removed, and it is not included with this permit.

### 40 CFR 63, Subpart ZZZZ: RICE Requirements

The six (6) compressor engines (E01, E02, E03, E04, E05 and E07) are existing non-emergency SI 4SLB engines rated over 500 hp at a major source of HAPs and do not have any applicable requirements from this subpart as specified in 40 CFR §§ 63.6590(b)(3)(ii) and 63.6600(c). However, the generator (G2) is an emergency SI engine rated at 500 hp at a major source of HAPs and is subject to the following requirements:

- The emission limitations listed in 40 CFR § 63.6602 and Table 2c (line 6) to 40 CFR Part 63, Subpart ZZZZ.
- The monitoring requirements listed in 40 CFR § 63.6625(e), (f), (h), and (j).
- The continuous compliance requirements listed in 40 CFR §§ 63.6605 & 63.6640 and Table 6 (Line 9) to 40 CFR 63, Subpart ZZZZ.
- The recordkeeping requirements listed in 40 CFR § 63.6655 (except c).
- The reporting requirements listed in Footnote 1 of Table 2c to 40 CFR Part 63, Subpart ZZZZ.
- The general provisions of 40 CFR Part 63. Except per 40 CFR § 63.6645(a)(5), the following do not apply: 40 CFR §§ 63.7(b) and (c); 63.8(e), (f)(4) and (f)(6); and 63.9(b)-(e), (g) and (h).

These requirements were specified in the emission units table.

### Ozone Season NO<sub>x</sub> emissions

This facility was previously subject to 45CSR1. 45CSR1 was repealed, and similar requirements are now contained in 45CSR40. 45CSR§40-90 contains Ozone Season NO<sub>x</sub> reduction requirements for stationary internal combustion engines. These requirements apply to the six (6) Cooper-Bessemer engines and turbine (E07). References to 45CSR§40-90 were added to the emission units table.

## Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

*45CSR4—To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors:* This rule shall not apply to the internal combustion engines, according to 45CSR§4-7.1.

*45CSR10—To Prevent and Control Air Pollution from the Emission of Sulfur Oxides:* 45CSR10 is not applicable to the facility's boilers and heater because they are less than 10 mmBtu/hr.

*45CSR21—To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds:* All storage tanks at the Clendenin station, which are listed as insignificant sources, are below 40,000 gallons in capacity which exempts the facility from 45CSR§21-28. Clendenin station is not engaged in the extraction or fractionation of natural gas which exempts the facility from 45CSR§21-29.

45CSR27—*To Prevent and Control the Emissions of Toxic Air Pollutants*: Natural gas is included as a petroleum product and contains less than 5% benzene by weight. 45CSR§27-2.4 exempts equipment “used in the production and distribution of petroleum products providing that such equipment does not produce or contact materials containing more than 5% benzene by weight.”

40 CFR 60 Subparts Dc—*Standards of Performance for Steam Generating Units*: There are two steam generating units, defined pursuant to 40 CFR § 60.41c, at this facility, and both are less than 10 mmBtu/hr; hence, Subpart Dc is not applicable.

40 CFR 60 Subpart GG—*Standards of Performance for Stationary Gas Turbines*: There is one turbine at Clendenin station which was installed in 1971. No modifications to the turbine have occurred since the original installation. According to 40 CFR § 60.330(b), this subpart applies to facilities that commenced construction, modification, or reconstruction after October 3, 1977. Therefore this subpart does not apply.

40 CFR 60, Subparts K and Ka—*Standards of Performance for Storage Vessels for Petroleum Liquids*: All tanks at the Clendenin station are below 40,000 gallons in capacity.

40 CFR 60, Subpart Kb—*Standards of Performance for Volatile Organic Liquid Storage Vessels*: All tanks at the Clendenin station are below 75 m<sup>3</sup> in capacity.

40 CFR 60, Subpart KKK—*Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant*: The Clendenin station is not engaged in the extraction or fractionation of natural gas liquids from field gas, the fractionation of mixed natural gas liquids to natural gas products, or both.

40 CFR 60, Subpart IIII—*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*: There are no compression ignition engines at the facility.

40 CFR 60, Subpart JJJJ—*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*: Engines at the facility were constructed, reconstructed, or modified prior to June 12, 2006.

40 CFR 60, Subpart KKKK—*Standards of Performance for Stationary Combustion Turbines*: Turbines at the facility were constructed, reconstructed, or modified prior to February 18, 2005.

40 CFR 63, Subpart HHH—*National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities*: The facility does not have a glycol dehydration unit and is therefore not subject to the requirements of this subpart.

40 CFR 63, Subpart YYYY—*Turbine MACT*: There is one turbine at Clendenin station which was installed in 1971. No modifications to the turbine have occurred since the original installation. This subpart does not apply pursuant to 40 CFR §63.6090(b)(4).

40 CFR 63, Subpart DDDDD—*Boiler MACT*: There is one heating system boiler (BL3) and one process heater (H1), defined pursuant to 40 CFR §63.7575, at this facility using gaseous fuel and both are less than 10 mmBtu/hr; hence, Subpart DDDDD is not applicable.

40 CFR 64—*Compliance Assurance Monitoring (CAM)*: The engines, boiler, and heater do not have any add-on control; therefore, in accordance with 40 CFR §64.2(a), CAM is not applicable to this facility.

## **Request for Variances or Alternatives**

None

## **Insignificant Activities**

Insignificant emission unit(s) and activities are identified in the Title V application.

## **Comment Period**

Beginning Date: August 31, 2012

Ending Date: October 1, 2012

All written comments should be addressed to the following individual and office:

Rex Compston, P.E.  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

**Procedure for Requesting Public Hearing**

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

**Point of Contact**

Rex Compston, P.E.  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1209 • Fax: 304/926-0478

**Response to Comments (Statement of Basis)**

Not applicable.